

## REMARKS

Claims 1, 4-6, 8-15, 18-24, 39-42, 45, and 47-57 are pending in the present application. No amendments have been made to the claims.

### Rejections under 35 U.S.C. 103

Applicant respectfully requests reconsideration of the rejection of claims 1, 4-6, 8-11, 15, 18-24, 39-42, 45, 47-48, and 55-56 under 35 USC Section 103(a) as being unpatentable over *Rangachari et al.* (“*Rangachari*”) (US Patent 6,470,227), in view of *Tadokoro et al.* (“*Tadokoro*”) (US Patent 6,463,352), further in view of *Tenney et al.* (“*Tenney*”) (US Patent 6,944,584), further in view of *Haverstock* (US 6,192,415), further in view of *Arackaparambil et al.* (“*Arackaparambil*”) (US 7,069,101). As discussed in further detail below, the combined teachings of these references do not disclose each and every feature of Applicant’s independent claim 1.

Applicant’s independent claim 1 is drawn to a tool management method executed by a tool server apparatus coupled to both a remote client system and a plurality of tools via distinct networks. According to the claimed method, a first request is received from the remote client system, and in response to the first request, a first message is sent to a tool. The first message is operable for initiating processing on the tool, and a logical description provided by the claimed tool object model enables the initiation of the processing.

The *Rangachari* reference teaches a method of automating a microelectronic manufacturing process by configuring application objects that implement a domain knowledge for a piece of equipment and implementing a workflow using the application object. However, as noted by the Office, *Rangachari* does not disclose the Applicant’s claimed features of using a first predetermined field in a portion of a first request as claimed. Nor does *Rangachari* disclose a uniform resource locator path including a function field and an object field and determining a function to be performed based on said function field in said uniform resource locator path. Furthermore, the office notes that *Rangachari* does not disclose the object field and the function field identifying a tool object model for an identified tool, the tool object model providing a

logical description for use in an automatic control environment of the factory and associated with the plurality of tools; wherein the logical description provided by the tool object model enables the initiation of the processing and determination of physical parameters of the identified tool to determine when to initiate the processing.

***(i) The Tadokoro reference does not disclose a tool object model providing a logical description which enables initiation of processing on a tool as claimed.***

*Tadokoro* teaches a plurality of cutting machines, each cutting machine having a monitor input device through which monitor data indicating the status of the cutting machine is input, and a plurality of virtual machine components for collecting the monitor data. However, while *Tadokoro* teaches various embodiments for monitoring the status of cutting machines, *Tadokoro* does not teach the claimed tool object model providing a logical description which enables the initiation of processing on a tool. The cited portions of *Tadokoro*, Col. 4, lines 45-65 and Col. 26, lines 45-65, relate to a virtual machine component and a job order user interface. However, *Tadokoro*'s virtual machine component merely scans instrumentation and maintains status information, and is not capable of initiating processing on a tool. And *Tadokoro*'s job order user interface merely allows one to place a job order, as *Tadokoro* teaches that jobs must be manually initiated and later confirmed as complete. Therefore, *Tadokoro*'s job order user interface also is not capable of initiating processing on a tool. *Tadokoro*, Col. 28, lines 26-45. As such, neither *Tadokoro*'s virtual machine component nor *Tadokoro*'s job order user interface discloses a tool object model providing a logical description which enables initiation of processing on a tool as claimed.

***(ii) There is insufficient motivation to combine the teachings of Tadokoro with those of Rangachari.***

Furthermore, Applicant respectfully submits that there is insufficient motivation to combine the teachings of *Tadokoro* with those of *Rangachari*. In the Office Action, the Office states that *Rangachari* and *Tadokoro* are analogous art because they present concepts and practices regarding distributed software components for controlling machines remotely via a network, and that it would have been obvious to incorporate *Tadokoro*'s teachings with those of

*Rangachari* for the purpose of improving workflow efficiency of a system by better monitoring processes, thereby preventing bottlenecks. *Tadokoro* teaches at Col. 2, lines 10-25 that (1) monitoring functions of cutting machines are limited due to lack of distributed capabilities; and (2) work flow bottlenecks, work stoppages, and potential damage to cutting machines and workpieces results from lack of control or management of cutting elements—especially because no data on cutting elements is kept or made accessible. However, neither of these issues cited by *Tadokoro* is neglected by *Rangachari*. Regarding the former, the Office already states that *Rangachari* presents concepts and practices regarding distributed software components, so there would be no lack of monitoring capability in *Rangachari*'s system. And regarding the latter, *Rangachari* already contemplates extensive equipment monitoring and control, for example at Col. 7, lines 25-45, and Col. 16, lines 33-51. Thus, Applicant submits that there would not have been sufficient motivation to combine the teachings of *Tadokoro* with those of *Rangachari* as suggested in the Office Action.

***(iii) Tadokoro does not disclose the Applicant's claimed feature of awaiting an event report from the tool.***

Moreover, with regard to Applicant's claimed method operation of awaiting an initiate processing acknowledge from the tool, and upon receipt of said initiate processing acknowledge from the tool, awaiting an event report from the tool indicating completion of the action, the Office cites Col. 18, lines 20-25 and Col. 19, lines 50-55 of *Tadokoro*. However, these portions of *Tadokoro* merely disclose a machine monitor which sends requests to virtual machine components for status updates, and a status field as a part of a job table which may have the values of waiting, processing, or completed. Though the Office indicates this to be equivalent to the Applicant's claimed subject matter, Applicant believes that *Tadokoro*'s teaching of receiving status updates from a virtual machine is not equivalent to the claimed method operation of awaiting an initiate processing acknowledge from the tool itself, followed by awaiting an event report from the tool indicating completion of the action. For while *Tadokoro*'s discloses repeated requests to virtual machine components for status updates, these are not specifically directed to the receipt of an initiate processing acknowledge or an event report.

***(iv) The Haverstock reference does not teach the claimed object and function fields of the Applicant's claimed URL.***

*Haverstock* is directed to a system for enabling access to non-HTML objects from a web browser. Specifically, *Haverstock* teaches the use of a URL which identifies an object, and “enables non-HTML actions to be identified in the URL and the action to be performed on or relating to the object” (Col. 5, lines 19-28). *Haverstock* discloses examples such as a system user retrieving a sales record and opening the document using a single URL, or indicating other actions such as running a file, creating a new file, or opening a file with filtered results. *Haverstock*, Col. 5, lines 19-40. Thus, it is clear that *Haverstock* discloses retrieval of virtual objects and non-HTML actions identified in the URL which are performed on the retrieved virtual object. However, the Applicant's claimed invention is not directed to the retrieval of a virtual object and the performance of an action on that virtual object. Rather, the claimed object and function fields of the Applicant's claimed URL identify a tool and cause initiation of processing. Thus, *Haverstock* does not teach the object and function fields of the Applicant's claimed URL.

Moreover, *Tadokoro* teaches a database server which “maintains a database of descriptive information describing the instrumented cutting machines and that is responsive to queries.” *Tadokoro*, Col. 4, lines 47-49. *Tadokoro*'s database is merely an intermediate monitoring component that facilitates transmission of status information. As discussed above, *Tadokoro* fails to disclose a system capable of actually initiating processing on a tool. Thus, even if one were to combine the cited teachings of *Haverstock* and *Tadokoro* in the manner suggested by the Office, the combination would still fail to teach a system capable of initiating processing carried out by a processing tool as designated in fields of a URL, as claimed by the Applicant.

Additionally, it is noted that in the Office Action, the Office states that it would have been obvious to incorporate *Haverstock*'s teachings of a URL with action commands into those of *Rangachari*, *Tadokoro*, and *Tenney* for the purpose of allowing system users to retrieve objects and identify actions with a single input command without requiring programming code. However, as noted above, the Applicant's claim is not directed to the retrieval of objects and

performance of actions on those objects, but rather identification of a tool and initiation of processing. Thus, the cited motivation to combine the teachings of *Haverstock* with those of *Rangachari*, *Tadokoro*, and *Tenney* is irrelevant to the Applicant's claimed invention.

For at least the foregoing reasons, claim 1 is patentable over the prior art teachings of *Rangachari*, *Tadokoro*, *Tenney*, *Haverstock*, and *Arackaparambil*. Claim 15 recites a data processing system analogous to the teachings of claim 1, and is therefore patentable over the prior art for at least the same reasons as claim 1. Likewise, Claims 4-6, 8-11, 18-24, 39-42, 45, and 47-48 are patentable over the prior art for at least the reason that each of these claims depends from claim 1 or 15.

Applicant respectfully request reconsideration of the rejection of claims 12-13, 25-26, and 49-54 under 35 U.S.C. 103(a) as being unpatentable over *Rangachari*, in view of *Tadokoro*, further in view of *Tenney*, further in view of *Haverstock*, further in view of *Arackaparambil*, and further in view of *Nilsen et al.* ("*Nilsen*") (US 6,081,665).

Claims 12-13, 25-26, 49-54, and 57 each depend from claims 1 or 15. The deficiencies of the prior art with regard to claims 1 and 15 have been discussed above. Therefore claims 12-13, 25-26, 49-54, and 57 are patentable over the cited art for at least the foregoing reasons, and by virtue of their dependence from claims 1 or 15.

#### Conclusion

In view of the foregoing remarks, Applicant respectfully submits that the pending claims are in condition for allowance.

A Notice of Allowance is respectfully requested. If any questions remain, the undersigned can be contacted at (408) 749-6913.

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If any additional fees are missing or due, please charge to **Deposit Account No. 50-0805**  
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Respectfully submitted,  
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